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An Anatomy of Bank Bail-ins

Why the Eurozone Needs a Fiscal Backstop for the Banking Sector

by Emiliós Avgouleas and Charles Goodhart²³

Abstract

Bail-ins could prove an effective way to replace the unpopular bail-outs. In the EU the doom-loop between bank and sovereign indebtedness left governments with a major conundrum. Thus, the EU resolution regime requires the prior participation of bank creditors in meeting the costs of bank recapitalisation before any form of public contribution is made. But, there is a danger of over-reliance on bail-ins. Bail-in regimes will not remove the need for public injection of funds, unless the risk is idiosyncratic. This suggestion raises concerns for banks in the periphery of the euro-area, which present very high levels of non-performing assets, crippling credit growth and economic recovery. To avoid pushing Eurozone banks with high NPL levels into bail-in centred recapitalisations, we have considered the benefits from and legal obstacles to the possible establishment of a euro-wide fund for NPLs that would enjoy an ESM guarantee. Long-term (capped) profit-loss sharing arrangements could bring the operation of the fund as close to a commercial operation as possible. Cleaning up bank balance sheets from NPLs would free up capital for new lending boosting economic recovery in the periphery of the Eurozone.

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1. Introduction

Bank bail-outs are a source of moral hazard and they undermine market discipline. Bail-outs can also have a destabilizing impact on public finances and sovereign debt. These concerns led to reforms meant to internalize the costs of bank failures of which the foremost is the implementation of bank creditor bail-in regimes. The bail-in approach constitutes a radical rethinking of who bears the ultimate costs of the operation of the financial system and especially of fractional reserve banking. Essentially, it replaces the public subsidy with a private penalty or with private insurance forcing banks to internalize the cost of the risks they assume (Avgouleas and Goodhart, 2014, 2015). This penalty is meant to force creditors to intensify bank monitoring, thereby helping to restore market discipline and become more alert about the levels of leverage a bank carries (Avgouleas, 2014). Creditor reaction to prospective bail-ins may raise *ex ante* the cost of bank funding and limit excessive leverage. Since shareholders have every incentive to build leverage to maximize their return on equity (Admati et al., 2013; Avgouleas and Cullen, 2015). So, the treat of creditor bail-in should, in principle, eliminate the ‘too-big-to-fail’ subsidy that bigger banks enjoy and the important governance costs that are associated with excessive leverage (Admati et al., 2012; Avgouleas and Cullen, 2014).

In the European Union (EU), the doom-loop between bank instability and sovereign indebtedness left governments with a major conundrum. But instead of using the European Stability Mechanism (ESM),²⁴ as part of a euro-TARP-like arrangement to offer a limited fiscal backstop to the European Banking Union (EBU), euro area governments thought it suitable to rely on bail-ins of bank liabilities. The EU resolution regime comprising the EU Bank Recovery and Resolution Directive (BRRD)²⁵ and the ESM statute,²⁶ requires, in the absence of private funds, the prior participation of bank creditors in meeting the costs of bank recapitalisations before any form of public contribution is made.

24. Intergovernmental Treaty Establishing the European Stability Mechanism, 2 February 2012, T/ESM 2012/en 2.

25. Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms OJ L 2014 173/190 [hereinafter BRRD].

26. ‘European Stability Mechanism By-Laws’, 8 October 2012.

What complicates such intentions is that non-performing bank assets in the eurozone, mainly comprising Non-Performing Loans (NPLs), have increased by more than three-fold to €928 billion as of end-September 2015 from €292 billion as of end-December 2007 (ESM, 2015, p. 42). European banks carry this large stock of NPLs on their balance sheets – the single largest legacy of the past crisis. NPLs are not distributed evenly across the euro area, with banks in crisis-hit periphery countries holding more than two thirds of the total for the euro area as a whole. In Portugal, for example, about 30% of small- and medium-sized enterprises currently have at least one loan that is not performing (ESM, 2015, p. 42). The proportion of bank capital that NPLs absorb rose to 8.1% of all bank lending as of end-September 2015 from 1.6% as of end-2007. At the beginning of the financial crisis, NPLs absorbed roughly the same proportion of banks' capital in both groups of countries (1.6%). By end-September 2015, however, this ratio had climbed to 14% in the peripheral countries versus a more limited 4% in the core countries (ESM, 2015, p. 42).

A large number of older and more recent research studies and reports by international organisations suggest that the level of NPLs in the banking sector can be important for credit extension and growth.²⁷ Weak bank balance sheets can act as a drag on economic activity, especially in economies that rely mainly on bank financing like Eurozone's. Relevant studies find that higher NPLs tend to reduce the credit-to-GDP ratio and GDP growth, while increasing unemployment. A recent IMF study by Aiyar et al. (2015a) has shown that this is also consistent with data from EZ banks over the last five years.

Aiyar *et al.* (2015b) have found that high NPL ratios tie up bank capital that could otherwise be used to increase lending, reduce bank profitability, and raise funding costs – thereby dampening credit supply.²⁸ Reducing NPLs expeditiously is therefore crucial to support credit growth. For this reason, ESM's view that sole reliance on GDP growth will not lead to a sufficiently fast decline of NPLs carries extra weight.²⁹ An IMF report on NPLs has noted that

27. The literature on financial dependence and growth is well-established Rajan and Zingales (1998), Kashyap et al. (1994). Several recent studies have looked specifically at the feedback effects from NPLs to macroeconomic performance and have reached similar conclusions. E.g., Klein (2013), Nkusu (2011), and Espinoza and Prasad (2010). K. Bergthaler, Y Liu, D Monaghan (2015).

28. Aiyar et al. (2015b), figure 2.

29. ESM, "Annual Report – 2015", pp. 42-43.

lasting recovery following a financial crisis requires bringing down NPLs. But, while the IMF has made the ratio of NPLs key to its measurements of financial sector strength,³⁰ it has not explained what is an acceptable level of NPLs, implying that the optimal ratio is as low as possible. The rationale, as may be gauged by said IMF report is that NPLs on banks' balance sheets create uncertainty and weigh on their ability to resume lending, and thereby influence aggregate demand and investment.³¹

The most likely source of such uncertainty extends to doubts about the bank's solvency itself,³² because the bank involved has not written down the true value of the NPL assets, and the market assumes that the accounting value of the capital that banks show on their books is overstated. Another important factor is that NPLs reduce bank profitability, and thus, however well a bank seems to be capitalised, a bank with very low profitability is always assumed to be only a few steps away from trouble.³³

The large stock of NPLs is an important cause of anaemic economic activity in the Eurozone not just because of reduced lending and overhang but also due to a persistent impression of bank fragility. Another issue is that unresolved NPLs suppress the economic activity of overextended borrowers³⁴ and trap resources in unproductive uses. So resolving impaired loans is tantamount to tackling the debt overhang stimulating demand for new loans for viable firms, while promoting the winding-down of unviable firms.³⁵ Finally, cleaning up the bank lending channel would enhance the transmission of monetary policy to the real economy.

The European Central Bank (ECB) has recently consulted on obstacles to NPL restructuring and supervisory and business tools to tackle NPLs, which clearly shows a strong intention to do so on a going concern bank basis (ECB, 2016). But what the ECB has put to consultation is more a framework for dealing with

30. The IMF employs a "nonperforming loans net of provisions to capital" ratio as an indication of the extent to which losses can be absorbed before the sector becomes technically insolvent. IMF (2015, Ch. 6, para 6.15).

31. ESM, "Annual Report – 2015", p. 4. 2016

32. In fact, if a separate set of variables to what EBA uses for its stress tests is employed, the impression of vulnerability is even stronger. See Acharya et al. (2016).

33. Indicatively, Acharya et al. (2016) note that "[s]ince the start of the Banking Union in Nov. 2014, European banks lost nearly half their market capitalization".

34. E.g., 80% of NPLs in Italy are loans to corporates (Jassaud and Kang, 2015, p. 6).

35. Ibid. p. 17; Aiyar et al. (2015b, p. 17).

new NPLs and tackling a manageable load of distressed assets through prudential and other measures and less a radical cleaning up of legacy loans. So disincentives to write off NPLs persist, due, *inter alia*, to low earlier provisioning,³⁶ and recapitalization and bail-in concerns are ever present given also low market capitalisations for Eurozone banks that discourage private investment.

One possible way of overcoming the problem of legacy loans would be the establishment of euro area Asset Management Company for NPLs. Addressing the NPL issue implies allocating losses within the system, e.g., banks customers, the banks, investors, or the states. However, concentration of NPL management in an AMC can create economies of scale. Also a euro-AMC could undertake to amortize loss over a longer period while freeing up bank balance sheets. This method is arguably superior to other asset protection schemes that leave NPLs on-balance sheet.

There are, however, many issues to consider before one could confidently advocate such an institutional reform. Some of these are the legal obstacles (e.g., enforcement of collateral, business liquidation) and tax dis-incentives encountered in many EU jurisdictions (e.g., Italy)³⁷ and the intricacies of domestic justice systems, which are widely blamed for the persistence of high NPL ratios in the Eurozone.³⁸ Yet many jurisdictions have made serious progress to remove legal obstacles and have streamlined their insolvency laws (e.g., Italy, Cyprus, Greece).³⁹ So further harmonization of national bankruptcy laws may not be as important as it would have been a few years ago. Moreover, even if complete harmonization was possible remedying problems relating to judicial process and culture would certainly be a long-term exercise. But tackling bank legacy assets in the periphery of the Eurozone cannot wait much longer for the aforementioned economic reasons.

Another key obstacle a euro-AMC would face would be the form of any public support it could enjoy to avoid a breach of the prohibition of article 125 of the Treaty for the Functioning of the European Union (TFEU). We suggest that a possible euro-AMC should utilize private arrangements for the

36. For disincentives facing bank managers to write off NPLs in Italy see Jassaud and Kang (2015, p. 11).

37. *Ibid.* p. 13.

38. Aiyar et al. (2015b).

39. E.g., at the end of 2015 Greece passed law 4354/2015 (the "NPL Law") aiming at facilitating the sale of NPL portfolios to non-bank companies.

transfer of NPLs to the AMC with losses amortized over a long-time and accompanied by (capped) profit-loss arrangements to cover any losses the AMC might suffer. As regards any residual final losses eurozone authorities might wish to consider the possibility of granting the AMC an ESM guarantee. Arguably, the closer to market terms the conditions governing the operation of a euro-AMC the more likely that such an arrangement could pass,⁴⁰ or entirely avoid state aid restrictions.⁴¹ Moreover, if the transfer of NPLs to the AMC becomes subject to implementation of a new business plan by selling banks for authorities to sanction the transactions and/or a structural conditionality to dispose of business lines and assets at commercial value to the market, then cleaning up of NPLs may also serve as an effective remedy to facilitate new entries to an over-concentrated sector.⁴²

The possibility of constructing a euro-AMC to relieve banks in eurozone's periphery from the burden that NPLs currently pose is also supported by the fact that the current EU resolution regime is unhelpful in fostering early resolution of distressed loan portfolios. In general, bail-ins have their own and largely underestimated risks. Overconfidence about the virtuous impact of bail-in regimes was in part the result of the regulatory and intellectual enthusiasm bail-ins have generated as an alternative to the discredited bailouts. Also due to the fact that in the Cyprus incident the deep haircut was partly absorbed by non-EU creditors.

But perceptions have changed since the mini-crash of European banking stocks in January and February 2016, and even more so due to the question marks hanging around banks beyond the Euro zone periphery. These concerns have brought into sharp focus the feasibility of imposition of losses on general bank creditors when there is a looming threat of a systemic crisis. They have also revealed the behavioural implications of the threat of generalized bail-ins.

40. See EU Commission, Press Release, "State aid: Commission gives final approval to existing guarantee ceiling for German HSH Nordbank", 3 May 2016. The rationale of earlier Commission decisions on the supply of an asset protection guarantee to Nordbank by its majority shareholders, the Lander of Hamburg and Schleswig Holstein, centered on the fact that the guarantee was offered on commercial terms. The latest decision requires drastic asset disposals. While the decision refers to state aid offered before the implementation of the BRRD and it is probably not the right precedent, the commercial terms language may not be ignored.

41. The key element of national AMC schemes to avoid state aid investigations and BRRD restrictions in the post-BRRD era has been asset disposal at commercial value (e.g., Hungary). See Mesnard et al. (2016, p. 7).

42. Following a wave of consolidation levels of concentration within the eurozone banking system have gone up by four points since 2008. In countries worst hit by the crisis concentration levels range from over 55 % (Spain) to nearly 100 % (Greece). See Garrido (2016), figure 2.

2. Unpacking the Bail-in process

A. Are Creditor Bail-ins a Superior Loss Absorption Mechanism?

(i) Who Should Bear the Losses?

The scale of losses flowing from bank failures is initially independent of the identity of those upon whom the burden of meeting that loss falls. But, such losses can also entail critical externalities. These have traditionally justified the use of public bail-outs to avoid the systemic threat that the failure of any bank beyond a certain size carries with it. As mentioned earlier, the bail-in process is based on the penalty principle, namely, that the costs of bank failures are shifted to where they best belong: bank shareholders and creditors. But the idea that the penalty for failure can be shifted onto an institution is incorrect. Ultimately all penalties, and similarly benefits, have to be absorbed by individuals, not inanimate institutions. When it is said that the bank will pay the penalty of failure, this essentially means that the penalty is paid, in the guise of worsened terms, by bank managers, bank staff, bank creditors, or the borrowers. The real question is which group of individuals will be asked to absorb the cost.

(ii) Contagion risk

A desideratum for a revenue raising mechanism is that the taxed cannot easily flee. It is difficult to avoid taxation, except by migration, which has many severe transitional costs. In contrast, it is easy to avoid being hit with the costs of creditor bail-in; you just withdraw or sell your claim. Consequently, triggering the bail-in process is likely to generate a capital flight and a sharp rise in funding costs, whenever the need for large-scale recapitalizations becomes apparent. Creditors who sense in advance the possibility of a bail-in, or creditors of institutions with similar asset or regional characteristics will have a strong incentive to withdraw deposits, sell debt, or hedge their positions through the short-selling of equity or the purchase of credit protection at an ever-higher premium disrupting the relevant markets. Such actions could be damaging and disruptive, both to a single institution and potentially to wider market confidence.

It is, of course, true that equity holders and bond holders cannot run in the same way that depositors can, but financial counterparties can easily do so

and will do so if they do not immediately see a hefty capital cushion in the bailed-in bank. If such counterparties flee then equity and bond holders would certainly follow and in their attempt to do so they would drive asset values sharply down. This would make the option of raising new money, or rolling over existing maturing bonds, unattractive or virtually impossible. In such circumstances, bank credit extension would stop, amplifying the downturn, lowering asset values and putting the solvency of other banks at risk.

Excluding depositors of all brands from bail-in might reduce the danger of contagion but would not remove it. In the absence of a fiscal backstop for other parts of the financial system, if bail-in is triggered before measures have been taken to buttress the rest of the financial system, a creditor flight from other banks will be certain, spreading the tremors throughout the financial system, even if those banks retain sufficient amounts of CoCos and other specially designed bail-in able debt whose only purpose is to absorb bank losses.

(iii) Valuations

Triggering the bail-in process will prove unsuccessful if bank losses are not properly identified in some finite form. The determination of bank losses including unrealized future losses must be accurately determined in order to avoid successive rounds of bail-in losses accruing to bank creditors. This might in fact prove a challenging task. For example, bank losses in the recent crisis have consistently been underestimated.

Asset valuation is an inexact science and market cyclicity makes this task even harder.⁴³ In the uncertain conditions of generalized asset value declines, the new (incoming) accountants, employed by the resolution agency, are likely to take a bad scenario (or even a worst case one) as their base case for identifying losses, to be borne by the bailed-in creditors, partly also to minimize the afore-mentioned danger of underestimation leading to further calls on creditors. Previously the accountants of the failing bank itself will have been encouraged (by management) to take a more positive view of its (going concern) value. Thus, the transition to bail-in is likely to lead to a huge discontinuity, a massive drop, in published accounting valuations.

43. E.g., Bank failures during boom conditions, for example resulting from fraud, such as Barings, are easier to handle with less danger of contagion.

For the resolved bank, itself a dimmer view of the value of bank assets will result in a much deeper write-off or conversion haircut and ensuing creditor losses than the valuation assumptions used by the previous set of auditors would have necessitated. This could put into question amongst the general public the existing valuations of other banks, and lead, possibly rapidly, to a contagious crisis. Moreover, as nobody really knows what creditors would have received in insolvency the no creditor worse off principle could mean nothing in practice.

Exclusive reliance on creditor bail-in to recapitalize banks could even result in several rounds of creditor bail-ins even post-resolution. This was the case with creditor bail-in at the Portuguese Novo Banco, which was the resulting good bank, from the resolution of the failed Espirito Santo bank.⁴⁴ But successive bail-in rounds are a recipe to scare investors when market funding will be needed the most to restore the resolved bank or its successors to full financial health. bank destroying market confidence in the resulting good bank post-resolution.

(iv) Post-bail-in funding

Market confidence in the bailed-in institution would have to be quickly restored in order to preserve franchise value and repay official liquidity support (Sommer, 2014). This is mostly dependent on how fast the capital structure of the requisite bank (or the new bank in the event of a 'closed' bank process) is rebuilt. If the institution has entered into a death spiral with customers, creditors and depositors fast disappearing, reversing the trend would doubtlessly prove a task of daunting proportions.

In fact, the implementers of the bail-in mechanism seem to have underestimated the dynamics of a bank run ex post, even where creditors face no potential losses in the aftermath of a bailout or a rescue by the resolution fund, due, presumably, to reputation risks as well as the (irrational) fear of future risks (Carlson and Rose, 2016). This dynamic is of course much greater in the case of banks where creditors have already experienced large losses due to the triggering of bail-in and where experience with subsequent bail-ins after the initial haircut is rife (Arnold and Hale, 2016; Whittall, 2016).

44. E.g., the senior creditors of Novo Bank had to suffer a further bail-in round inspite the steep haircut applied to junior creditors of the failed bank. See Arnold and Hale (2016) and Whittall (2016).

B. Behavioural and other ex ante impact of bail-ins on timely intervention and speed of resolution

Speed of resolution/recapitalization (albeit at the expense of flexibility) is one of the reasons for the popularity of bail-ins among regulators (Sommer, 2014). The issue of when to trigger the bail-in process, taking also into account the requirements of early intervention regimes (for example, Title III BRRD), is a matter of cardinal importance. Identification of the right time and conditions to trigger the bail-in tool in a process that converts either specially designed or general bail-inable debt will be one of the most important decisions of any bank supervisor. If the supervisors trigger bail-in early, then the full measure of losses may not have been fully revealed, risking further rounds of bail-in. But if the supervisor determines to use the bail-in tool at a later stage, when the full scale of losses to be imposed on creditors is revealed, they risk a flight of general bank creditors.

One of the biggest challenges facing modern resolution regimes is giving regulators and, to some extent, the troubled institution's management the right incentives to act early especially when it comes to tackling problematic assets, mainly NPLs. However, experience so far has shown that in a scenario where the banks of a given financial system face a high rate of NPLs, regulators act faster where there is a possibility of a state backed AMC (Arner et al., 2016). In contrast, where tackling a large number of NPLs on a systematic basis raises the possibility of creditor bail-ins, regulators show signs of forbearance. Namely, the behavioural impact of uncertain outcomes associated with the application of bail-in regimes seems to be the exact opposite of what was intended by the new resolution regime: earlier intervention. Naturally, the more delayed the onset of resolution, the more essential it will be to put more emphasis on an earlier recovery phase, which may be delayed if bank management does not face the right incentives (Goodhart and Segoviano, 2015).

3. Building a Eurozone AMC

As said earlier, a possible solution to the nearly intractable problem of NPLs in the periphery of the eurozone could be the establishment of a euro-AMC. The BRRD does not entirely rule out the possibility of injection of public

funds to a distressed bank, subject to the very strict conditions of articles 37(10), 56, 58 BRRD, and as a last resort. Inevitably, such injection of public funds would indeed amount to a form of state assistance.⁴⁵ It is, thus, unclear, whether a euro-AMC operating on the basis of a public guarantee would benefit from the exemption.⁴⁶

On the other hand, AMC transactions with going concern banks could bypass the BRRD requirements altogether. NPLs could be transferred to the AMC by banks that have neither entered the resolution or pre-resolution stage. Sales of NPLs to a euro-AMC would free up capital for new lending, relieving, to some extent, eurozone's debt overhang, chiefly observed in Greece and Italy. But another obstacle would remain: the EU state-aid rules under article 107 TFEU.⁴⁷

EU state aid rules have been applied to the EU banking sector with various degrees of flexibility. A euro-AMC could buy at a specified range of haircuts bank NPLs that have not already been tackled by country AMCs e.g. outside of Ireland or Spain. The haircut would not exceed by much any provisions and write offs the bank has already charged to minimize bank losses. Overall the objective of the AMC would be to buy the asset at a price that wouldn't trigger a requirement for immediate capital injections.⁴⁸ Any losses incurred by the AMC if the asset is subsequently sold below acquisition price could be amortized and covered through (capped) long-term profit-loss arrangements with the selling bank.

The impact on bank capital of relevant losses would be amortized and absorbed in conjunction with other measures currently adopted to boost EU bank capital, including the adoption of IFRS 9.⁴⁹ Moreover, (capped) long-term profit loss arrangements would, first, encourage banks to pursue strategic defaulters. The higher the recovery rate the lower the possibility of future loss. Secondly such arrangements open the possibility of banks sharing in any profit derived from higher recovery values.

45. Art 2(1)(28), BRRD.

46. For forms of ex ante burden sharing Goodhart and Schoenmaker (2009).

47. Rec 57, Rec 41, BRRD.

48. See also Mesnard et al. (2016, p. 6).

49. EBA Press Release, "EBA provides its views on the implementation of IFRS 9 and its impact on banks across the EU", 10 Nov. 2016.

A key difference between national AMCs working this way and a possible euro-AMC would be that residual investor losses on liquidation beyond a pre-determined level could be covered by an ESM guarantee. Without said guarantee it would be impossible to attract in sufficient quantities of private investment for a euro-AMC. Admittedly, any direct fiscal transfers from member states to a euro-AMC would fall foul of Art. 125 of the TFEU. But would the same be the case if the scheme only enjoyed an ESM guarantee?

While the legal questions may not be answered with certainty from the outset, arguably, if structured properly, the fiscal transfer element in the building up of the euro-AMC would be much less pronounced, notwithstanding the need to change the ESM statute in to render such a guarantee. First, while the AMC could operate for as long as its shareholders desire and at a minimum until all (capped) profit and loss agreements are settled, there is no reason for the ESM guarantee to last for so long. The AMC and the ESM could review both the necessity of the guarantee and its terms on an annual, bi-annual, or five-year basis, making it clear that the guarantee would be withdrawn as soon as the AMC shows profitability ratios against overall assets that exceed a pre-agreed threshold. Namely, the guarantee would be mostly utilized to inspire confidence to private investors for the first few years of the AMC's operation, but, in practice, it may never be used. Secondly, the ESM itself is more or less a sovereign fund whose direct state funding of 80 billion Euro paid up capital is less than 16% of all funding available, with the rest of its lending merely guaranteed by members' budgets. If the ESM guarantee was to be offered on commercial terms⁵⁰ - enabling thus the AMC to exclusively attract private investment, any charge of fiscal burden sharing would seem much less convincing, at least, until the guarantee materialized, if ever. This would especially be the case if selling banks had (capped) long-term profit-loss agreements with the AMC. Again such burden sharing and attendant financial engineering has been successfully employed in a variety of NPL transfer schemes during the Asian crisis of late 1990s,⁵¹ and more recently by the US TARP, which was wound down with a profit of 15 billion USD.⁵²

50. For the costs of ESM lending to its members see ESM 2015 Annual Report (p.51)

51. Arner et al. (2016).

52. Jonathan Weisman, "U.S. Declares Bank and Auto Bailouts Over, and Profitable" *NYTimes* 19 Dec. 2014

However, philosophical problems relating to moral hazard and Too-Big-To-Fail would remain. Thus, we suggest that institutions selling NPLs to the AMC - other distressed financial instruments ought to be excluded from the scheme - could be subject to a structural conditionality similar to that undertaken by the UK government in the context of the RBS rescue.⁵³ Such conditionality would tackle fears of reinforcing big banks and the TBTF subsidy. It could also be a sufficient measure to conform with the EU state aid framework and open up Eurozone banking markets to new contestants/entrants.

Another argument in favour of a euro-AMC is that it could give a considerable boost to Eurozone's fragmented market for NPLs that is also quite illiquid. Given the yield appetite of institutional investors in today's debt markets, a euro-AMC could act as a catalyst for the Eurozone market for distressed banking debts. Given ability to safely disseminate due diligence reports through FinTech platforms, which can hold vast amounts of data, the presence of a big player could attract considerable private investor interest. A final benefit is that a euro-AMC could, indirectly, relieve current pressure placed on the ECB in the context of sometimes controversial bank bond purchase programmes.

4. Conclusion

The desire to find an effective way to replace the public subsidy for TBTF banks and the unpopular bail-out process is entirely understandable. But, there is a danger of over-reliance on bail-ins when the risk is not idiosyncratic. Namely, the bail-in process could be used successfully to recapitalize domestic SIFIs, but only if the institution has failed due to its own actions and omissions (e.g., fraud). On the other hand, where the banks of a country or a region face a systemic problem, e.g., they carry a high number of bad assets, bail-ins can trigger a bank funder panic both *ex ante* and *ex post*. As the history of financial crises has made clear, imposing haircuts on general bank creditors during a systemic event is a sure way to accelerate the panic. In fact, contagion: a flight of creditors from other institutions may be uncontrollable. Achieving the goal

53. EU Commission Press release, "State aid: Commission approves amendments to restructuring plan of Royal Bank of Scotland", 9 April 2014.

of making private institutions responsible for their actions would be the best policy in an ideal world where financial ‘polluters’ would be held responsible for their actions. But, in practice, it might prove an unattainable goal.

To clean up bank balance sheets without pushing Eurozone banks into bail-centred recapitalisations, necessitated by the present dearth of investor interest in their equity, we have considered the possibility of a euro-AMC. While such a vehicle could act as a catalyst for attracting new private entrants and boosting liquidity in the euro-market for distressed bank debt, it would certainly face important legal obstacles. Yet long-term profit-loss sharing arrangements could bring the operation of a euro-AMC as close to a commercial standing as possible. A viable euro-AMC would require some form of a fiscal backstop. This could possibly be offered in the form of an ESM guarantee. Cleaning up bank balance sheets from NPLs would free up capital for new lending which would boost economic recovery in the periphery of the Eurozone. Historical experience has shown that similar experiments have been largely successful, chiefly in Asia and more recently in the USA.

References

- Acharya, V., Pierret, D., and Steffen, S. (2016). Capital Shortfalls of European Banks since the Start of the Banking Union. Mimeo. Available at: http://www.sascha-steffen.de/uploads/5/9/9/3/5993642/shortfalls_v28july2016_final.pdf
- Admati, A., DeMarzo, P.M., Hellwig, M.F., and Pfleiderer, P. (2012). Debt Overhang and Capital Regulation. Rock Center for Corporate Governance at Stanford University Working Paper No 114.
- Admati, A.R., DeMarzo, P.M., Hellwig, M.F., and Pfleiderer, P. (2013). The Leverage Ratchet Effect. Max Planck Institute for Research on Collective Goods, Working Paper Series 2013/13.
- Aiyar, S., Bergthaler, W., Garrido, J.M., Ilyina, A., Jobst, A., Kang, K., Kovtun, D., Liu, Y., Monaghan, D., and Marina Moretti, M. (2015a). “A strategy for resolving Europe’s problem loans”. IMF Staff Discussion Note No 15/19.
- Aiyar, S., Ilyina, A., and Andreas Jobst, A. (2015b). How to tackle Europe’s non-performing loan problem. Voxeu.org, 05 Nov. 2015, figure 2.
- Arner, D., Avgouleas, E., and Gibson, E. (2016). A Comparative Analysis of NPL Resolution Strategies During the Asian Crisis, the GFC, and the Eurozone Debt Crisis. ADB WP.
- Arnold, M., and Hale, T. (2016). ECB under fire as Portugal hits Novo Banco bondholders. FT.com. Available at: <https://www.ft.com/content/9f276d60-b55b-11e5-b147-e5e5bba42e51>
- Avgouleas, E. (2014). Bank leverage ratios and financial stability: A micro- and macroprudential perspective, University of Edinburgh Working Paper.

Avgouleas, E., and Cullen, J. (2014). Market Discipline and EU Corporate Governance Reform in the Banking Sector: Merits, Fallacies, and Cognitive Boundaries. *Journal of Law and Society*, 41 (1), 28-50.

Avgouleas, E., and Cullen, J. (2015). Excessive Leverage and Bankers' Pay: Governance and Financial Stability Costs of a Symbiotic Relationship, *Columbia Journal of European Law*, 21 (1).

Avgouleas, E., and Goodhart, C. (2015). Critical reflections on bank bail-ins. *Journal of Financial Regulation*, 1, 3–29.

Bergthaler, K., Liu, Y., and Monaghan, D. (2015). Tackling small and medium sized enterprise problem loans in Europe. IMF Staff Discussion Note No 15/04.

Carlson, M., and Rose, J. (2016). Can a Bank Run Be Stopped? Government Guarantees and the Run on Continental Illinois. BIS WP No 554. Available at: <http://www.bis.org/publ/work554.htm>

European Central Bank – ECB – (2016). Draft guidance to banks on non-performing loans. September 2016. Available at: https://www.bankingsupervision.europa.eu/legalframework/publiccons/pdf/npl/npl_guidance.en.pdf

European Stability Mechanism – ESM – (2015). Annual Report.

Espinoza, R., and Prasad, A. (2015). Nonperforming loans in the GCC banking system and their macroeconomic effects. IMF Working Paper No 10/244.

Garrido, A. (2016). The eurozone banking system: A sector undergoing transformation. EuropeG, Policy Brief no. 8.

Goodhart, C., and Avgouleas, E. (2014). A Critical Evaluation of Bail-in as a Bank Recapitalisation Mechanism, CEPR, DP10065, July.

Goodhart, C., and Schoenmaker, D. (2009) Fiscal Burden Sharing in Cross-Border Banking Crises. *International Journal of Central Banking*, March issue, 141-165.

Goodhart, C., and Segoviano, M. (2015). Optimal bank recovery. IMF WP/15/217. Available at: <https://www.imf.org/external/pubs/cat/longres.aspx?sk=43325.0>

IMF (2015b). Financial Soundness Indicators Compilation Guide. March 2006, last updated: Nov. 2015. Available at: <https://www.imf.org/external/np/sta/fsi/eng/fsi.htm>

IMF, EBRD, EIB, EBRD, ECB, and EC (2012). European Banking Coordination “Vienna Initiative - Working Group on NPLs in Central, Eastern and Southeastern Europe. Working Group on NPLs in Central, Eastern and Southeastern Europe. Available at: <https://www.imf.org/external/region/eur/pdf/2012/030112.pdf>

Jassaud, N., and Kang, K. (2015). “A Strategy for Developing a Market for Nonperforming Loans in Italy. Working Paper WP/15/24. Available at: <https://www.imf.org/external/pubs/cat/longres.aspx?sk=42689.0>

Kashyap, A., Lamont, O., and Stein, J. (1994). Credit conditions and the cyclical behavior of inventories. *Quarterly Journal of Economics*, 109, 565-592.

Klein, N. (2013). Non-performing loans in CESEE: Determinants and impact on macroeconomic performance. IMF Working Paper.

Mesnard, B., Margerit, A., Power, C., and Magnus, M. (2016). EP Briefing Non-performing loans in the Banking Union: stocktaking and challenges. European Parliament. Available at: [http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/574400/IPOL_BRI\(2016\)574400_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/574400/IPOL_BRI(2016)574400_EN.pdf)

Rajan, R., and Zingales, L. (1998). Financial Dependence and Growth. *American Economic Review*, 88, 559-586

Sommer, J. H. (2014). Why Bail-In? And How! *Economic Policy Review*, 20, 207–228.

Whittall, C. (2016). Investors File Suit Against Bank of Portugal Over Novo Banco. *WSJ.com*. Available at: <http://www.wsj.com/articles/investors-file-suit-against-bank-of-portugal-over-novo-banco-1459878564>